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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,212	12/09/2005	Rudolfus Antonious Van Benthem	21580USWO (C038435/019415)	2957
7590 Stephen M Haracz Bryan Cave 1290 Avenue of the Americas New York, NY 10104			EXAMINER FREEMAN, JOHN D	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 12/10/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/560,212	<b>Applicant(s)</b> VAN BENTHEM, RUDOLFUS ANTONIOUS	
	<b>Examiner</b> John Freeman	<b>Art Unit</b> 1794	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/08</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Rätzsch et al. (WO 02/28261).

3. The examiner provides the national stage filing of the international application, US 2005/0020750, as an English translation of WO '261. All references herein refer to US '750.

4. Regarding claims 1 and 4:

5. Rätzsch et al. (hereafter Rätzsch) disclose aminoplast resins [0002]. Such resins include polycondensates of melamine derivatives and aldehydes, such as furfural (which appears to be mistakenly identified as "furfurol"), glyoxal, and glutaraldehyde [0014]. These condensates would form a compound conforming to Applicant's formula (I).

6. Rätzsch uses the resins to make microcapsules [0012]. The process to make the microcapsules includes adding the precondensates into an aqueous dispersion of a "core former", curing and then drying the microcapsules [0044].

7. Regarding claim 2:

8. Glyoxal and glutaraldehyde provide an aldehyde-group as the EWG.

***Claim Rejections - 35 USC § 103***

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rätzsch et al. (WO 02/28261) as evidenced by Scott (US 2,456,567), Mohrman et al. (US 2,485,059), Ebel et al. (US 4,888,412), Albrecht et al. (US 5,891,983), or Koike et al. (US 2002/0025481).

11. Regarding claim 3:

12. Rätzsch discloses a process of making microcapsules from the condensation products of melamine derivatives and C<sub>1</sub>-C<sub>10</sub> aldehydes as previously explained.

13. Rätzsch is silent, however, with regard to an aldehyde having an acid or ester endgroup (e.g. glyoxylic acid).

14. Acid-containing aldehydes such as glyoxylic acid were well-known as functional equivalents for the non-limiting exemplary aldehydes disclosed by Rätzsch: they were aldehydes known to successfully undergo a condensation reaction with melamine and its derivatives. As evidence the examiner provides several references to this effect. Scott discloses coatings produced from ammeline-aldehyde condensation products, wherein the aldehydes include glyoxal and glyoxylic aldehyde (i.e. glyoxylic acid) (col 3 ln 23-36). Mohrman discloses the interchangeability of various aldehydes, including glyoxylic aldehyde and glyoxal, in melamine condensation reactions (col 5 ln 14-22). Albrecht discloses triazine condensation products with glyoxylic acid to produce formaldehyde-free products (col 2 ln 25-33). Ebel discloses a condensation product of melamine and glyoxal or glyoxylic acid (col 1 ln 46-54). Koike discloses the condensation of a glyoxylate and melamine [0044].

15. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use glyoxylic acid as the aldehyde of Rätzsch's invention because it was a known functional equivalent to Rätzsch's exemplary aldehydes with a reasonable expectation of success at forming the encapsulating material described by Rätzsch.

16. Regarding claim 5:

17. The ratio of melamine derivative to aldehyde ranges from 1:1 to 1:6 [0014].

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18. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rätzsch et al. (WO 02/28261) in view of Albrecht et al. (US 5,891,983).

19. Regarding claim 3:

20. Rätzsch discloses a process of making microcapsules from the condensation products of melamine derivatives and C<sub>1</sub>-C<sub>10</sub> aldehydes as previously explained.

21. Rätzsch is silent, however, with regard to an aldehyde having an acid or ester endgroup (e.g. glyoxylic acid).

22. Albrecht discloses triazine condensation products with glyoxylic acid to produce formaldehyde-free products (col 2 ln 25-33). Albrecht points out that formaldehyde is a known "toxicological risk" (col 1 ln 44-50).

23. At the time of the invention, it would have been obvious to one of ordinary skill in the art to use glyoxylic acid as the aldehyde of Rätzsch's invention to arrive at a formaldehyde-free product, which would have fewer health risks.

24. Regarding claim 5:

25. The ratio of melamine derivative to aldehyde ranges from 1:1 to 1:6 [0014].

### ***Response to Arguments***

26. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

27. Applicant's cancellation of claims 6-13 renders the Double Patenting rejection moot.

28. Applicant's amendment of claim 1, wherein X now equals NR<sub>5</sub> precludes the use of North and Skoultchi as prior art; they teach compounds wherein X equals O only.

### ***Conclusion***

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Parekh '911 discloses amino-formaldehyde products that are transesterified. Itotani JP '112 disclose a resin comprising the condensation product of melamine and glyoxylic acid. Furst '615 discloses most aspects of the present invention, but it and other documents in the patent family are unavailable as prior art.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Freeman whose telephone number is (571)270-3469. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571)272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John Freeman  
Examiner  
Art Unit 1794

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/Callie E. Shosho/  
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